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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,571	11/21/2003	Koji Shigemura	1670.1020	9396
49455	7590	06/06/2006	EXAMINER	
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			LIN, JAMES	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,571

Applicant(s)

SHIGEMURA, KOJI

Examiner

Jimmy Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/21/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group III, claims 14-19 in the reply filed on 11/10/2005 is acknowledged. The traversal is on the ground(s) that Group I and Group II are not distinct. The argument is unconvincing because it is not related to the elected species. However, the Examiner acknowledges that inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be formed by another and materially different method such as etching a metal sheet to form the mask.
2. The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

3. Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The recitation of "wherein the frame is flat on at least a side of the frame" and "wherein the cover mask is flat on at least a side of the cover mask" does not further limit claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsugi et al. (2002/0150674) in view of Ito et al. (5,652,067) and Martin (4,676,193).

Utsugi teaches a method of manufacturing an organic EL device, the method comprising:

forming a first electrode layer 11 in a predetermined pattern on an insulating substrate 10 [0038, 0044];

forming an organic film comprising at least a patterned emission layer 13 on the first electrode layer [0049];

forming a second electrode layer 15 in a predetermined pattern on the organic film [0038];

wherein the organic film and the second electrode layer are deposited using a deposition mask frame assembly [0053 – 0054, 0058] comprising:

a mask comprising a thin plate (95) in which a predetermined pattern of apertures is formed (Figs. 2-4).

Utsugi does not explicitly teach sealing the electrode layer. However, the Examiner takes Official Notice that it is extremely well known in the art of manufacturing organic EL devices to apply a sealing layer over the cathode to protect the cathode and the organic materials from harmful effects of air and moisture. See, e.g., Ito, col. 19, lines 30-39. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have sealed the second electrode layer in order to have protected the cathode and organic material from harmful effects.

Utsugi and Ito do not explicitly teach that the frame supporting one surface of the mask so that the mask is tensed, wherein the frame has a flat surface where the frame supports the one surface of the mask, and a cover mask supporting an opposite surface of the mask, wherein the cover mask corresponds to the frame and has a flat surface where the cover mask supports the opposite surface of the mask. However, Martin

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discloses a mask assembly that is suitable for vacuum vapor deposition (column 1, lines 13-21 and column 2, lines 54-59). Fig. 7 shows a mask assembly 32 comprising: a mask 40', a frame 34, and a cover mask 90. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used the mask assembly of Martin in the EL vacuum evaporation of Utsugi. One would have been motivated to do so with the expectation of using a mask assembly that is dimensionally stable at the operating temperatures of vacuum evaporation.

Claim 15: Utsugi teaches that the mask may be formed of nickel [0042].

Claim 16: Martin teaches that the mask can be formed by electro-forming (column 1, lines 28-31).

Claim 17: Martin teaches that parts of the mask can be joined together by welding (column 10, lines 22-32).

6. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsugi et al. (2002/0150674) in view of Ito et al. (5,652,067) and Martin (4,676,193), as applied to claims 14 and 17 above, and further in view of Kitazume (2002/0025406).

Claim 18: Utsugi, Ito, and Martin are discussed above, but do not explicitly teach that the mask, frame, and cover mask are joined by spot welding. However, Kitazume teaches that spot welding is a suitable method for joining the pieces of a shadow mask used for vapor deposition to form organic EL devices [0004], [0010]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used spot welding as the particular method of joining the mask pieces of Martin with a reasonable expectation of success because spot welding is recognized in the art as a suitable method for joining the pieces of a shadow mask used for vapor deposition to form organic EL devices. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness.

Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Claim 19: The welding pitch may be 1 mm [0035].

Response to Arguments

7. Applicant's arguments with respect to claims 14-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Thursday 8 - 5:30 and Friday 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/31/2006



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER